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## (11) **EP 2 298 190 A3**

| EUROPEAN PATE   | ENT A  | APPLICATION  |   |
|---|--|--|---|
| Date of publication A3:<br>30.03.2011 Bulletin 2011/13  | (51)   | Int Cl.:<br>A61B 17/115 <sup>(2006.01)</sup><br>A61B 17/11 <sup>(2006.01)</sup>  | A61B 17/072 <sup>(2006.01)</sup>  |
| Date of publication A2:<br>23.03.2011 Bulletin 2011/12  |  |  |   |
| Application number: 10010026.2  |  |  |   |
| Date of filing: 21.02.2001  |  |  |   |
| Designated Contracting States:<br>AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU<br>MC NL PT SE TR        | (71)   |  |   |
| Designated Extension States:<br>AL LT LV MK RO SI   | (72)   | New Hope   | chael, P.   |
| Priority: 22.02.2000 US 510927  | (74)   |  | nio. Antonio  |
| Document number(s) of the earlier application(s) in accordance with Art. 76 EPC: 01911011.3 / 1 259 173 | (14)   | •  | er & Dodge Innovations LLP  |
|   | Date of publication A3:<br><b>30.03.2011 Bulletin 2011/13</b><br>Date of publication A2:<br><b>23.03.2011 Bulletin 2011/12</b><br>Application number: <b>10010026.2</b><br>Date of filing: <b>21.02.2001</b><br>Designated Contracting States:<br><b>AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU</b><br><b>MC NL PT SE TR</b><br>Designated Extension States:<br><b>AL LT LV MK RO SI</b><br>Priority: <b>22.02.2000 US 510927</b><br>Document number(s) of the earlier application(s) in<br>accordance with Art. 76 EPC: | Date of publication A3:<br>30.03.2011 Bulletin 2011/13(51)Date of publication A2:<br>23.03.2011 Bulletin 2011/12Application number: 10010026.2Date of filing: 21.02.2001(71)Designated Contracting States:<br>AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU<br>MC NL PT SE TR<br>Designated Extension States:<br>AL LT LV MK RO SI(72)Priority: 22.02.2000 US 510927<br>Document number(s) of the earlier application(s) in<br>accordance with Art. 76 EPC:(74) | 30.03.2011Bulletin 2011/13A61B 17/115 (2006.01)<br>A61B 17/11 (2006.01)Date of publication A2:<br>23.03.2011Bulletin 2011/12Application number: 10010026.2Date of filing: 21.02.2001Designated Contracting States:<br>AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU<br>MC NL PT SE TR<br>Designated Extension States:<br>AL LT LV MK RO SI(71)Priority: 22.02.2000US 510927Document number(s) of the earlier application(s) in<br>accordance with Art. 76 EPC:<br>01911011.3 / 1 259 173(74)Representative: Masch<br>Southampton |

# (54) An electromechanical driver and remote surgical instrument attachment having computer assisted control capabilities

(57) A medical tool comprising an electromechanical driver (100) and a surgical instrument attachment (200) for use in invasive surgery, including a handle (102) coupled to a flexible sheath (104) which is in turn coupled to a surgical attachment. The handle of the driver includes the electromechanical driver and at least one processor element (140) which controls the actions of the electro-

mechanical driver, and therefore the application elements of the surgical attachment, based on information relayed between the processor element and remotely activateable sensor (150,152) assemblies in the surgical instrument attachment.

Printed by Jouve, 75001 PARIS (FR)



### EUROPEAN SEARCH REPORT

Application Number EP 10 01 0026

| ategory                        | Citation of document with indication<br>of relevant passages   | n, where appropriate,  | Relevant<br>to claim   | CLASSIFICATION OF THE<br>APPLICATION (IPC) |
|--------------------------------|--|--|--|--|
| K<br>Y                         | US 5 667 517 A (HOOVEN N<br>16 September 1997 (1997<br>* figures 1-3,5,17 *  | MICHAEL DAWSON)<br>-09-16)   | 1-8,10,<br>13,16-18<br>6,9,11,   | INV.<br>A61B17/115                         |
| ſ                              | US 5 693 042 A (BOIARSK<br>AL) 2 December 1997 (199<br>* column 7, paragraph 3   | 97-12-02)  | 6,11,12,<br>14,15  |  |
| ſ                              | US 5 609 285 A (GRANT R<br>AL) 11 March 1997 (1997<br>* figures 1,6,7 *  | <br>ICHARD L [US] ET<br>-03-11)<br>  | 9  |  |
|                                |  |  |  | TECHNICAL FIELDS<br>SEARCHED (IPC)<br>A61B |
|                                |  |  |  |  |
|                                |  |  |  |  |
|                                | The present search report has been dra   | awn up for all claims  |  |  |
|                                | Place of search  | Date of completion of the search   |  | Examiner                                   |
|                                | Munich   | 17 February 2011   | Sch  | ießl, Werner                               |
| X : parti<br>Y : parti<br>docu | ATEGORY OF CITED DOCUMENTS<br>icularly relevant if taken alone<br>icularly relevant if combined with another<br>iment of the same category<br>nological background | T : theory or principle<br>E : earlier patent doo<br>after the filing date<br>D : document oited in<br>L : document oited fo | underlying the ir<br>ument, but publis<br>the application<br>r other reasons | ivention                                   |

#### EP 2 298 190 A3

#### ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 10 01 0026

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

| 1/-02-2011 | 7-02 | 2-20 | 11 |
|------------|------|------|----|
|------------|------|------|----|

| Patent document<br>cited in search report |   | Publication<br>date |  | Patent family<br>member(s)   |  | Publication<br>date  |
|---|---|---------------------|--|--|--|--|
| US 5667517                                | A | 16-09-1997          | US<br>US<br>US   |  | A<br>A<br>A  | 21-05-199<br>21-05-199<br>24-01-199  |
| US 5693042                                | A | 02-12-1997          | AU<br>AU<br>AU<br>AU<br>CA<br>EP<br>JP<br>US<br>US<br>US<br>US | 5285298<br>5285398<br>5285498<br>2147951<br>0679367<br>7299074<br>5529235<br>5535937 | A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A<br>A | 02-04-199<br>09-11-199<br>02-04-199<br>02-04-199<br>02-04-199<br>29-10-199<br>02-11-199<br>14-11-199<br>25-06-199<br>16-07-199<br>08-10-199<br>16-07-199 |
| US 5609285                                | а | 11-03-1997          | US   | 5632433  | <br>А  | 27-05-199  |

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82